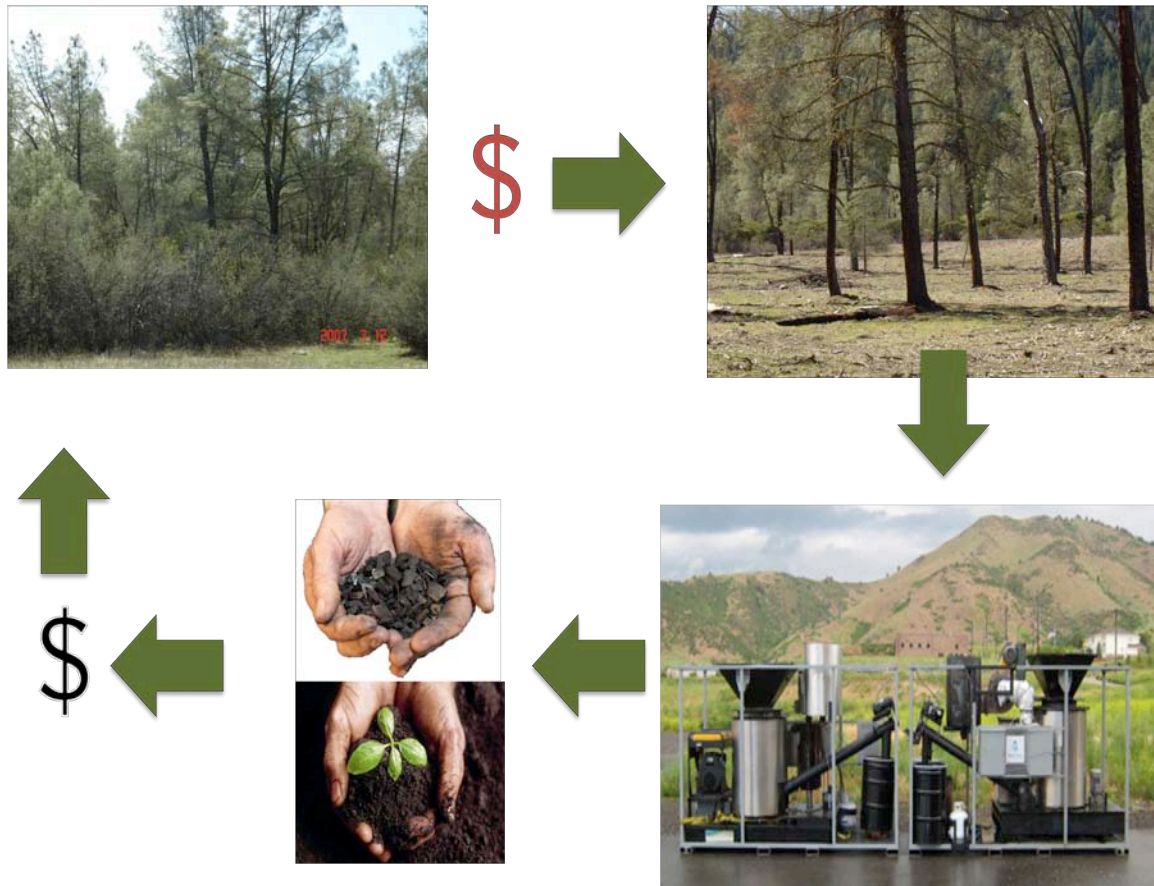


## Biochar Demonstration Project Description:

The WBWG Biochar Demonstration Project creates a model that will help landowners pay for the cost of removing biomass through the sale of biochar. Biomass that is selectively removed from demonstration plots in the Usal Redwood Forest (50,000 acres owned by the Redwood Forest Foundation) will be converted into biochar and sold as a soil amendment and carbon sequestration tool. Biochar production from waste wood will demonstrate how we can create a product that provides a local input to agriculture (reducing transportation costs and carbon emissions) and help mitigate climate change through carbon sequestration.



The location of the project on the Usal Redwood Forest presents a unique opportunity to address the cultural needs of Native American Tribes that have traditionally used to area for ceremonial purposes as well as for a source of food. Under the ownership of the Redwood Forest Foundation Inc. a commitment has been made to open up sections of the forest for Native American access and for the creation of one of more acorn harvesting orchards. There are a multitude of suitable areas in the Usal Redwood Forest, but these potential sites are overcrowded and will require costly biomass removal in order to convert them into orchards ideal for acorn production. The Biochar Demonstration Project will target at least on area for acorn orchard creation.

This project demonstrates the concept of a “restoration economy” - addressing environmental / ecological needs of the watershed and local farmers, cultural needs of people who live near the forest and the economic support required to make these improvements.

#### Project Steps:

- 1) Remove excess biomass from overcrowded stands on the Usal Redwood Forest
- 2) Convert biomass into biochar through a process called pyrolysis
- 3) Sell biochar locally as an amendment to soil
- 4) Use net revenue to finance further biomass removal

#### Project Benefits:

- 1) Removing excess biomass increases groundwater recharge, in-stream flow, and reduces the risk of catastrophic forest fire events, which are detrimental to terrestrial and aquatic habitat.
- 2) At least one Native American acorn-harvesting orchard will be created through the removal of excess biomass.
- 3) Biochar is a soil amendment, increasing water and nutrient retention and simultaneously sequestering carbon.
- 4) Net revenue from the sale of biochar will pay for variable costs of the project creating an economically sustainable model for restoration.

#### **About Biochar:**

“If you could continually turn a lot of organic material into biochar, you could, over time, reverse the history of the last two hundred years...We can, literally, start sucking some of the carbon that our predecessors have poured into the atmosphere down through our weeds and stalks and stick it back in the ground. We can run the movie backward. We can unmine some of the coal, undrill some of the oil. We can take at least pieces of the Earth and – this is something we haven’t done for quite a while – leave them Better Than We Found Them.”

*~ Bill McKibben, author, climate activist and founder of 350.org <http://www.biochar-international.org/>*

Biochar production is not a new idea. Indigenous people of the Amazonian basin produced and buried biochar before the arrival of Europeans. Studies of the Amazonian basin show that biochar derived carbon remains sequestered in the region hundreds and thousands of years later. Biochar benefits are not limited to carbon sequestration; additionally, it acts as a soil amendment, retaining nutrients, water and improved microbial activity:

- The carbon in one ton of biochar is equivalent to 3 tons of Carbon**
- Biochar sequesters 50% of the original carbon contained in biomass vs. 3% retained from burning**
- 12% of total global anthropogenic carbon emissions can be offset if slash and burn is replaced with slash and char**
- Biochar enhances plant growth by supplying and retaining nutrients, and improving soil physical and biological properties**

<http://www.biochar-international.org/>